REMARKS

Drawing objection

The Examiner has objected to the drawings for allegedly failing to show the spring-loaded member recited in claim 4. The rejection should be withdrawn. The spring loaded member is shown as element 414 in Figures 22, 23 and 35. The spring loaded member (pad 414) and its operation is described in the specification 26 line 23 to page 27 line 23. Since the claimed spring-loaded pad is shown in the drawings the objection to the drawings is improper.

§ 112 rejections

Claims 1-4 and 10 were rejected as allegedly being indefinite for failure to recite structural elements which "perform the recited functionality." The Examiner makes the following specific objections:

1) "the claim [claim 1] does not set forth what elements would link the movement of the cutting element assembly through the aperture to the movement of the shield to the second position, and the movement of the cutting element assembly from the deployed position to the home position to the movement of the shield from the second position to the first position"

Response: The applicants submit the claim is not indefinite for failing to recite any particular structure to achieve this function. The applicants disclose a sealer in which the cutting element assembly and shield are constructed in a manner wherein movement of one part (the cutting element assembly) causes movement of another part (the shield). This is common

practice in the field of engineering[1]. The movement of one part (cutting assembly) also causing movement of another part (shield) happens to be a feature of the design of the shield 416 wherein movement of the cutting assembly 402/414/422 through the opening 404 causes the shield 416 to rotate up and allow the cutting assembly to move through the opening 404, and the shield 416 moves back to the closed position simply by gravity acting on the shield when the cutting assembly is in the home position. See specification at page 26 line 19 to page 27 line 10. The applicants are claiming their invention as it is in fact constructed in the preferred embodiment. No further structural elements are needed to express how the device is constructed or how it operates. A person skilled in the art would understand the scope of the invention as it is currently expressed, and therefore no further structural features are necessary.

2) "It is also unclear whether or not any controller is intended."

Response: the claim does not require a controller to operate the shield. Nor is a controller used in the applicants' preferred embodiment. The claim is open ended as to the controller. This is not a proper objection. For example, the claim also does not require the shield to be made of a particular material, or the motor to be of a certain type or model. There is no end to the possible aspects of the applicants' invention that could in theory be either recited or excluded from the claim. Applicants are not required to recite every possible embodiment of the invention, or exclusion of everything that may not be part of the invention, in a single independent claim. Rather, § 112 requires the applicant to particularly point and distinctly claim

[1] Consider, for example, an egg-beater. When the user rotates the handle, certain gears interact and the mechanical action of rotating the handle causes rotation of the beaters. A claim reciting that rotation of the handle causes the rotation of the beaters would not be indefinite; surely the Examiner would not require recitation of the specifics of the gears in the egg-beating mechanism.

the subject matter which the applicants regards as his invention. See 35 U.S.C. § 112, ¶ 2. That has been done in claim 1. The rejection is not sound.

3) "It appears that the recited function is not possible without a controlling device. See also claim 4."

Response. The Examiner is incorrect. The recited function of the shield does not require a controlling device and no controlling device is in fact used. The sealer simply includes mechanical features (452 and 430, 454, see Figure 23, page 28 line 15 et seq.; page 26 lines 6-9) such that the movement of the cutting assembly through the aperture moves the shield out of the way. There is no "controller" in the sense of an electronic control module or the like that is used in this process. It is entirely mechanical. Hence, recitation of a "controller" in the claim would be contrary to the illustrated embodiment. The claim is certainly not rendered indefinite by failing to recite a device (controller) which is not in fact used in the illustrated embodiment!

Claim 4 is simply reciting the mechanical action of the cutting element assembly and the spring loaded member (pad 414). No "controller" is used in this action either. The rejection is unsound.

4) "Additionally, it is not clear what structural elements would provide for the sample testing."

Response: Applicants are not required to recite specifics of the structural elements performing sample testing since they do not regard such structural elements as part of or necessary to this invention. The applicants have added the feature of the sample testing instrument to provide a general environment or technical application for where this invention is

used. The specifics of, for example, an optical station where the test sample cards are read has nothing to do with the main thrust of the invention --- the sealer station that seals the cards. Again, the Examiner is improperly attempting to impose her views on what the invention might be, in contravention of Section 112's requirements that the claims set forth what *the applicant* considers to be his invention. [2]

Functional language, as used in this claim, does not necessarily render a claim improper or indefinite. See MPEP 2173.05(g). Furthermore, merely because a claim is broadly drafted also does not render the claim indefinite. See MPEP 2173.04. Section 2172.01 of the MPEP cited by the Examiner states that a claim which "fails to interrelate essential elements of the invention as defined by applicants in the specification" may be rejected under § 112, ¶ 2. The applicants' claims interrelate the elements of the invention in the manner described in the specification and there is no unclaimed essential matter. All that is required is that the claims define the patentable subject matter with "a reasonable degree of particularity and distinctness." MPEP § 2173.02 (emphasis in original). The Examiner's requirements for greater specificity in the claims are manifestly not reasonable, as explained herein. The rejection under § 112, ¶ 2 should be withdrawn.

[2] Consider, for example, an invention related to the details of an automobile automatic transmission. If the claim recited that the transmission was connected to an internal combustion engine (in order to recite an intended environment of use of the transmission), it would unreasonable for an Examiner to require the applicant to recite the specifics of the internal combustion engine itself (e.g., how many cylinders it was, whether it was a diesel engine, fuel injected, turbo charged, etc.) since the applicant's invention is directed to the transmission itself, not the engine. Similarly, if the claim recited an automobile having the inventive transmission, no reasonable Examiner would require the applicant to specify whether the automobile had power steering, windshield wipers, etc.

Obviousness Rejection

Claims 1-4 and 10 were rejected as obvious under 35 U.S.C § 103 over Karl et al. (U.S. 5,891,396) in view of Wirtz-Odenthal, U.S. 5,161,723.

The sealer of the present invention differs substantially from the sealer of the Karl reference, in that the Karl reference does not disclose a sealer having the enclosure and shield features recited in claim 1:

an enclosure having an aperture and shield moveable between a first position covering said aperture and a second position not covering said aperture;
a moveable cutting element assembly having a home position located within said enclosure;
a motor for moving said cutting element assembly through said aperture to a deployed position wherein said cutting element assembly is positioned external to said enclosure at a position for cutting said conduit, wherein movement of said cutting element assembly through said aperture causes said shield to move to said second position, and wherein movement of said cutting assembly from said deployed position to said home position causes said shield to move from said second position to said first position covering said aperture, whereby when said cutting element is in said home position, said shield and said enclosure prevent inadvertent contact with said cutting assembly.

The Examiner cites to a passage in Wirtz-Odenthal at col. 1 lines 21-27. The reference is there discussing the teachings of DE 3049840 C2. The DE '840 reference cited in Wirtz-Odenthal has a U.S. counterpart, namely Macgrory et al., U.S. patent 4,427,144.

The Wirtz-Odenthal reference (and the Macgrory reference cited therein) also do not teach or suggest the invention of claim 1. While Macgrory shows an aperture and a shield (the drop plate 34), the Wirtz-Odenthal and Macgrory references do not suggest a cutting element which includes a motor that moves the cutting element through the opening and moves the shield to the second (retracted position). In the DE (Macgrory) reference cited in Wirtz-Odenthal, the cutting wire remains in place and is not actuated by a motor. The plastic film comes into contact

with the wire due to the action of the user raising up the film with their hands, not through any action of a motor. (See Macgrory, col. 3 lines 1-9).

There is nothing in Karl that would suggest that the sealer in Karl should be modified to have the enclosure and shield features as set forth in Wirtz-Odenthal or Macgrory. The Karl et al. instrument is a completely automated instrument, and once a tray loaded with test devices is placed in the Karl instrument, the processing operations (including sealing operation) occur without any human involvement. The sealing operation is performed deep within the instrument and behind protective covering panels. Thus, one skilled in the art would not be motivated to combine the sealing features of Karl with Wirtz-Odenthal/Macgrory because Macgrory relies on manual movement of the object to be sealed - - the film - - in order to cut the film, and no manual movement occurs in Karl. The combination of the various references appears to be no more than an improper hindsight attempt to reconstruct the applicants' claims.

Claim 1 further recites that "wherein movement of said cutting element assembly through said aperture causes said shield to move to said second position, and wherein movement of said cutting assembly from said deployed position to said home position causes said shield to move from said second position to said first position covering said aperture . . . ". This is not the case in Macgrory. The action which moves the shield ("drop plate" 34) in Macgrory is the action of pulling and lifting up of the sheet of film, not movement of the hot cutting wire. The hot cutting wire in Macgrory does not move, nor does it cause the drop plate to open.

Combining Macgrory with Karl would require a complete reconstruction and redesign of the Karl sealer in a completely different manner from that described in the claims. Macgrory teaches that movement of the shield is caused by movement of the article to be cut – the sheet of film in Macgrory. Applying this concept to Karl would require that a shield is moved out of the

way due to movement of the *tray* carrying the test sample cards. How this would be accomplished, and the purposes it would serve, are not at all apparent. For one thing, when the movement of the test cards in Karl occurs during sample processing, the instrument is closed off from the user by protective covering panels and such a design would serve no human protective function at all.

Regarding claim 4, the Examiner is citing to a spring-loaded carriage feature show in Figure 17 of Karl. The carriage shown in Figure 17 is used as part of a transport system for moving the test sample cards relative to an optical reading system 800. The purpose of the spring biasing provided by springs 714 in Karl is to make sure that the cards are moved by the drive belt 710 and this requires friction between the top of the cards and the slot 720 running across the top of the optical system 800. The springs (714 in Figure 17) insure contact between the bottom surface of the test sample cards and the drive belt 710 of the transport system and the upper surface of the test sample cards and the slot 720. These features in Karl have nothing whatsoever to do with sealing of the cards.

Furthermore, in the sealing design of Karl, the sealer cutting wire in Karl does not need or use any spring loaded pad as recited in claim 4 since the cards are held securely in the tray and the tubes will be sealed automatically as the carrier for the cards advances past the sealing wire when it is in the lowered position. There is no rationale for applying the spring loaded card movement concepts of Figure 17 of Karl to the sealing design of Karl since the spring loading of Figure 17 is not needed to seal cards in the Karl sealing station. In particular, since the test cards are resting in the cassette (see Figure 5), all that is required is to lower the hot cutting wire 506 to

the proper elevation and then as the cassette is advanced past the hot cutting wire the cutting occurs. See col. 16 lines 6-19. Any fore and aft movement of the cards is constrained by the structures in the cassette which hold the cards. No biasing of the cards, or the hot cutting wire, by means of a spring is required or disclosed in Karl.

Conclusion

Applicant submits that the rejections should all be withdrawn and the case passed to issuance. Prompt and favorable action to that end is requested.

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